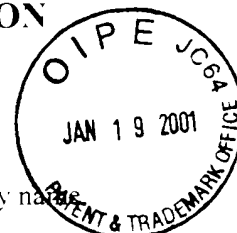


DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY



As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am an original, first and joint inventor of subject matter (process, machine, manufacture, or composition of matter, or an improvement thereof) which is claimed and for which a patent is sought by way of the application entitled

Superconducting Single Photon Detector

which (check) ☐ is attached hereto.
☐ and is amended by the Preliminary Amendment attached hereto.
☒ was filed on July 28, 2000 as Application Serial No. 09/628,116
☐ and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

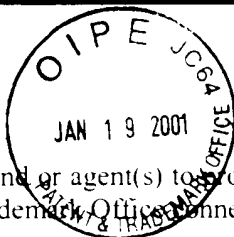
| Prior Foreign Application(s) | | | Priority Claimed | |
|------------------------------|---------|----------------------|--------------------------|--------------------------|
| Number | Country | Day/Month/Year Filed | Yes | No |
| N/A | | | <input type="checkbox"/> | <input type="checkbox"/> |

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

| Provisional Application Number | Filing Date |
|--------------------------------|-------------|
| N/A | |

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112. I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

| Application Serial No. | Filing Date | Status (patented, pending, abandoned) |
|------------------------|-------------|---------------------------------------|
| N A | | |



I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Alan H. MacPherson (24,423); Brian D. Ogonowsky (31,988); David W. Heid (25,875); Norman R. Klivans (33,003); Edward C. Kwok (33,938); David E. Steuber (25,557); Michael Shenker (34,250); Stephen A. Terrile (32,946); Peter H. Kang (40,350); Ronald J. Meetin (29,089); Ken John Koestner (33,004); Omkar K. Suryadevara (36,320); David T. Millers (37,396); Michael P. Adams (34,763); Robert B. Morrill (43,817); James E. Parsons (34,691); Philip W. Woo (39,880); Emily Haliday (38,903); Tom Hunter (38,498); Michael J. Halbert (40,633); Gary J. Edwards (41,008); Daniel P. Stewart (41,332); John T. Winburn (26,822); Tom Chen (42,406); Fabio E. Marino (43,339); Don C. Lawrence (31,975); Marc R. Ascolese (42,268); Carmen C. Cook (42,433); David G. Dolezal (41,711); Roberta P. Saxon (43,087); Mary Jo Bertani (42,321); Dale R. Cook (42,434); Sam G. Campbell (42,381); Matthew J. Brigham (44,047); Hugh H. Matsubayashi (43,779); Patrick D. Benedicto (40,909); T.J. Singh (39,535); Shireen Irani Bacon (40,494); Rory G. Bens (44,028); George Wolken, Jr. (30,441); John A. Odozynski (28,769); Cameron K. Kerrigan (44,826); Paul E. Lewkowicz (44,870); Theodore P. Lopez (44,881); Mayankkumar M. Dixit (44,064); Eric Stephenson (38,321); Christopher Allenby (45,906); David C. Hsia (46,235); Mark J. Rozman (42,117); Margaret M. Kelton (44,182); Do Te Kim (46,231); Alex Chen (45,591); Monique M. Heyninck (44,763); Gregory J. Michelson (44,940); Jonathan Geld (44,702); Emmanuel Rivera (45,760); Jason FarHadian (42,523); Matthew J. Spark (43,453); and Elaine H. Lo (41,158).

Please address all correspondence and telephone calls to:

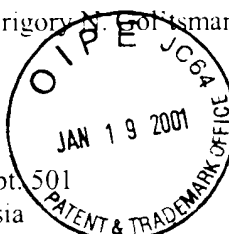
Norman R. Klivans
Attorney for Applicants
SKJERVEN MORRILL MacPHERSON LLP
25 Metro Drive, Suite 700
San Jose, California 95110-1349

Telephone: 408-453-9200
Facsimile: 408-453-7979

I declare that all statements made herein of my own knowledge are true, all statements made herein on information and belief are believed to be true, and all statements made herein are made with the knowledge that whoever, in any matter within the jurisdiction of the Patent and Trademark Office, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be subject to the penalties including fine or imprisonment or both as set forth under 18 U.S.C. 1001, and that violations of this paragraph may jeopardize the validity of the application or this document, or the validity or enforceability of any patent, trademark registration, or certificate resulting therefrom.

| | | |
|------------------------------------|---|---------------------|
| Full name of first joint inventor: | Roman Sobolewski | |
| Inventor's Signature: | <i>ROMAN SOBOLIEWSKI</i> | Date: DEC. 11, 2000 |
| Residence: | Pittsford, New York 14534 | |
| Post Office Address: | 3 Cambrie Circle Pittsford, NY 14534 | Citizenship: POLAND |

| | | | |
|-------------------------------------|--|--------------|--------|
| Full name of second joint inventor: | Grigory N. Goltsman | | |
| Inventor's Signature: | | Date: | |
| Residence: | Moscow, Russia | | |
| Post Office Address: | 74 Altufevskoe Ch., Apt. 501 Moscow, 127349, Russia | Citizenship: | RUSSIA |



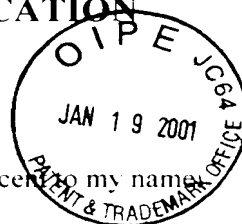
| | | | |
|------------------------------------|--|--------------|--------|
| Full name of third joint inventor: | Alexey D. Semenov | | |
| Inventor's Signature: | | Date: | |
| Residence: | Moscow, Russia | | |
| Post Office Address: | 11 Lukinskaya Street, Apt. 616 Moscow, 119634, Russia | Citizenship: | RUSSIA |

| | | | |
|-------------------------------------|--|--------------|--------|
| Full name of fourth joint inventor: | Oleg V. Okunev | | |
| Inventor's Signature: | | Date: | |
| Residence: | Moscow, Russia | | |
| Post Office Address: | 4 Ak. Vinogradova Street, Apt. 172 Moscow, 113143, Russia | Citizenship: | RUSSIA |

| | | | |
|------------------------------------|--|--------------|-----|
| Full name of fifth joint inventor: | Kenneth R. Wilsher | | |
| Inventor's Signature: | | Date: | |
| Residence: | Palo Alto, California | | |
| Post Office Address: | 1085 Emerson St Palo Alto, CA 94301 | Citizenship: | USA |

| | | | |
|------------------------------------|--|--------------|--------|
| Full name of sixth joint inventor: | Steven A. Kasapi | | |
| Inventor's Signature: | | Date: | |
| Residence: | San Francisco, California | | |
| Post Office Address: | 584 Castro Street San Francisco, CA 94114 | Citizenship: | CANADA |

DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY



As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am an original, first and joint inventor of subject matter (process, machine, manufacture, or composition of matter, or an improvement thereof) which is claimed and for which a patent is sought by way of the application entitled

Superconducting Single Photon Detector

which (check) ☐ is attached hereto.
☐ and is amended by the Preliminary Amendment attached hereto.
☒ was filed on July 28, 2000 as Application Serial No. 09/628,116
☐ and was amended on (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

| Prior Foreign Application(s) | | | Priority Claimed | |
|------------------------------|---------|----------------------|--------------------------|--------------------------|
| Number | Country | Day/Month/Year Filed | Yes | No |
| N/A | | | <input type="checkbox"/> | <input type="checkbox"/> |

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

| Provisional Application Number | Filing Date |
|--------------------------------|-------------|
| N/A | |

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

| Application Serial No. | Filing Date | Status (patented, pending, abandoned) |
|------------------------|-------------|---------------------------------------|
| N/A | | |

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Alan H. MacPherson (24,423); Brian D. Ogonowsky (31,988); David W. Heid (25,875); Norman R. Klivans (33,003); Edward C. Kwok (33,938); David E. Steuber (25,557); Michael Shenker (34,250); Stephen A. Terrile (32,946); Peter H. Kang (40,350); Ronald J. Meetin (29,089); Ken John Koestner (33,004); Omkar K. Suryadevara (36,320); David T. Millers (37,396); Michael P. Adams (34,763); Robert B. Morrill (43,817); James E. Parsons (34,691); Philip W. Woo (39,880); Emily Haliday (38,903); Tom Hunter (38,498); Michael J. Halbert (40,633); Gary J. Edwards (41,008); Daniel P. Stewart (41,332); John T. Winburn (26,822); Tom Chen (42,406); Fabio E. Marino (43,339); Don C. Lawrence (31,975); Marc R. Ascolese (42,268); Carmen C. Cook (42,433); David G. Dolezal (41,711); Roberta P. Saxon (43,087); Mary Jo Bertani (42,321); Dale R. Cook (42,434); Sam G. Campbell (42,381); Matthew J. Brigham (44,047); Hugh H. Matsubayashi (43,779); Patrick D. Benedicto (40,909); T.J. Singh (39,535); Shireen Irani Bacon (40,494); Rory G. Bens (44,028); George Wolken, Jr. (30,441); John A. Odozynski (28,769); Cameron K. Kerrigan (44,826); Paul E. Lewkowicz (44,870); Theodore P. Lopez (44,881); Mayankkumar M. Dixit (44,064); Eric Stephenson (38,321); Christopher Allenby (45,906); David C. Hsia (46,235); Mark J. Rozman (42,117); Margaret M. Kelton (44,182); Do Te Kim (46,231); Alex Chen (45,591); Monique M. Heyninck (44,763); Gregory J. Michelson (44,940); Jonathan Geld (44,702); Emmanuel Rivera (45,760); Jason FarHadian (42,523); Matthew J. Spark (43,453); and Elaine H. Lo (41,158).

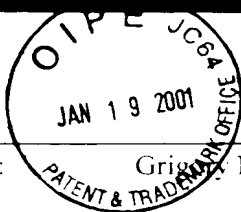
Please address all correspondence and telephone calls to:

Norman R. Klivans
Attorney for Applicants
SKJERVEN MORRILL MacPHERSON LLP
25 Metro Drive, Suite 700
San Jose, California 95110-1349

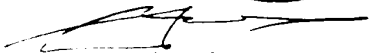
Telephone: 408-453-9200
Facsimile: 408-453-7979

I declare that all statements made herein of my own knowledge are true, all statements made herein on information and belief are believed to be true, and all statements made herein are made with the knowledge that whoever, in any matter within the jurisdiction of the Patent and Trademark Office, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be subject to the penalties including fine or imprisonment or both as set forth under 18 U.S.C. 1001, and that violations of this paragraph may jeopardize the validity of the application or this document, or the validity or enforceability of any patent, trademark registration, or certificate resulting therefrom.

| | | | |
|------------------------------------|---|--------------|--------|
| Full name of first joint inventor: | Roman Sobolewski | | |
| Inventor's Signature: | | Date: | |
| Residence: | Pittsford, New York 14534 | | |
| Post Office Address: | 3 Cambric Circle Pittsford, NY 14534 | Citizenship: | POLAND |



Full name of second joint inventor: Grigoriy N. Gol'tsman

Inventor's Signature: 

Date: 9 Dec 2000 (12/09/2000)

Residence: Moscow, Russia

Post Office Address: 74 Altufevskoe Ch., Apt. 501
Moscow, 127349, Russia

Citizenship: RUSSIA

Full name of third joint inventor: Alexey D. Semenov

Inventor's Signature: 

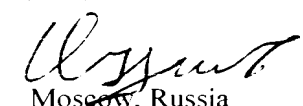
Date: 12/11/2000

Residence: Moscow, Russia

Post Office Address: 11 Lukinskaya Street, Apt. 616
Moscow, 119634, Russia

Citizenship: RUSSIA

Full name of fourth joint inventor: Oleg V. Okunev

Inventor's Signature: 

Date: 12/12/2000

Residence: Moscow, Russia

Post Office Address: 4 Ak. Vinogradova Street, Apt. 172
Moscow, 113143, Russia

Citizenship: RUSSIA

Full name of fifth joint inventor: Kenneth R. Wilsher

Inventor's Signature:

Date:

Residence: Palo Alto, California

Post Office Address: 1085 Emerson St
Palo Alto, CA 94301

Citizenship: USA

Full name of sixth joint inventor: Steven A. Kasapi

Inventor's Signature:

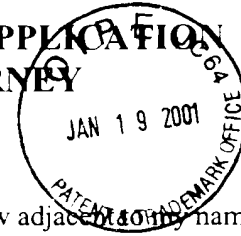
Date:

Residence: San Francisco, California

Post Office Address: 584 Castro Street
San Francisco, CA 94114

Citizenship: CANADA

DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY



As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am an original, first and joint inventor of subject matter (process, machine, manufacture, or composition of matter, or an improvement thereof) which is claimed and for which a patent is sought by way of the application entitled

Superconducting Single Photon Detector

- which (check) ☐ is attached hereto.
☐ and is amended by the Preliminary Amendment attached hereto.
☒ was filed on July 28, 2000 as Application Serial No. 09/628,116
☐ and was amended on ____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) of any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

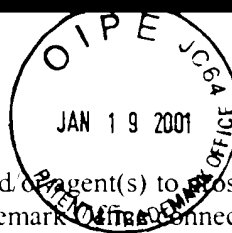
| Prior Foreign Application(s) | | | Priority Claimed | |
|------------------------------|---------|----------------------|--------------------------|--------------------------|
| Number | Country | Day/Month/Year Filed | Yes | No |
| N/A | | | <input type="checkbox"/> | <input type="checkbox"/> |

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

| Provisional Application Number | Filing Date |
|--------------------------------|-------------|
| N/A | |

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) or PCT international application(s) designating the United States of America listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information, which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56, which became available between the filing date of the prior application(s) and the national or PCT international filing date of this application:

| Application Serial No. | Filing Date | Status (patented, pending, abandoned) |
|------------------------|-------------|---------------------------------------|
| N/A | | |



I hereby appoint the following attorney(s) and agent(s) to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith:

Alan H. MacPherson (24,423); Brian D. Ogonowsky (31,988); David W. Heid (25,875); Norman R. Klivans (33,003); Edward C. Kwok (33,938); David E. Steuber (25,557); Michael Shenker (34,250); Stephen A. Terrile (32,946); Peter H. Kang (40,350); Ronald J. Meetin (29,089); Ken John Koestner (33,004); Omkar K. Suryadevara (36,320); David T. Millers (37,396); Michael P. Adams (34,763); Robert B. Morrill (43,817); James E. Parsons (34,691); Philip W. Woo (39,880); Emily Haliday (38,903); Tom Hunter (38,498); Michael J. Halbert (40,633); Gary J. Edwards (41,008); Daniel P. Stewart (41,332); John T. Winburn (26,822); Tom Chen (42,406); Fabio E. Marino (43,339); Don C. Lawrence (31,975); Marc R. Ascolese (42,268); Carmen C. Cook (42,433); David G. Dolezal (41,711); Roberta P. Saxon (43,087); Mary Jo Bertani (42,321); Dale R. Cook (42,434); Sam G. Campbell (42,381); Matthew J. Brigham (44,047); Hugh H. Matsubayashi (43,779); Patrick D. Benedicto (40,909); T.J. Singh (39,535); Shireen Irani Bacon (40,494); Rory G. Bens (44,028); George Wolken, Jr. (30,441); John A. Odozynski (28,769); Cameron K. Kerrigan (44,826); Paul E. Lewkowicz (44,870); Theodore P. Lopez (44,881); Mayankkumar M. Dixit (44,064); Eric Stephenson (38,321); Christopher Allenby (45,906); David C. Hsia (46,235); Mark J. Rozman (42,117); Margaret M. Kelton (44,182); Do Te Kim (46,231); Alex Chen (45,591); Monique M. Heyninck (44,763); Gregory J. Michelson (44,940); Jonathan Geld (44,702); Emmanuel Rivera (45,760); Jason FarHadian (42,523); Matthew J. Spark (43,453); and Elaine H. Lo (41,158).

Please address all correspondence and telephone calls to:

Norman R. Klivans
Attorney for Applicants
SKJERVEN MORRILL MacPHERSON LLP
25 Metro Drive, Suite 700
San Jose, California 95110-1349

Telephone: 408-453-9200
Facsimile: 408-453-7979

I declare that all statements made herein of my own knowledge are true, all statements made herein on information and belief are believed to be true, and all statements made herein are made with the knowledge that whoever, in any matter within the jurisdiction of the Patent and Trademark Office, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be subject to the penalties including fine or imprisonment or both as set forth under 18 U.S.C. 1001, and that violations of this paragraph may jeopardize the validity of the application or this document, or the validity or enforceability of any patent, trademark registration, or certificate resulting therefrom.

| | | | |
|------------------------------------|---|--------------|--------|
| Full name of first joint inventor: | Roman Sobolewski | | |
| Inventor's Signature: | | Date: | |
| Residence: | Pittsford, New York 14534 | | |
| Post Office Address: | 3 Cambric Circle Pittsford, NY 14534 | Citizenship: | POLAND |

Full name of second joint inventor:

Grigory N. Golitsman

Inventor's Signature:

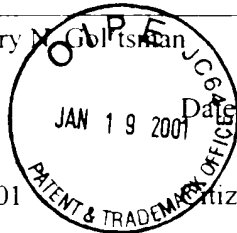
Residence:

Moscow, Russia

Post Office Address:

74 Altufevskoe Ch., Apt. 501
Moscow, 127349, Russia

Citizenship: RUSSIA



Full name of third joint inventor:

Alexey D. Semenov

Inventor's Signature:

Date:

Residence:

Moscow, Russia

Post Office Address:

11 Lukinskaya Street, Apt. 616
Moscow, 119634, Russia

Citizenship: RUSSIA

Full name of fourth joint inventor:

Oleg V. Okunev

Inventor's Signature:

Date:

Residence:

Moscow, Russia

Post Office Address:

4 Ak. Vinogradova Street, Apt. 172
Moscow, 113143, Russia

Citizenship: RUSSIA

Full name of fifth joint inventor:

Kenneth R. Wilsher

Inventor's Signature:

Kenneth R. Wilsher

Date: December 4, 2000

Residence:

Palo Alto, California

Post Office Address:

1085 Emerson St
Palo Alto, CA 94301

Citizenship: USA

Full name of sixth joint inventor:

Steven A. Kasapi

Inventor's Signature:

Steven A. Kasapi

Date: December 13, 2000

Residence:

San Francisco, California

Post Office Address:

584 Castro Street PMB 681
San Francisco, CA 94114

Citizenship: CANADA